TREE PLANTING GUIDELINES:

Tree Size and Condition: **Reference ANSI Z60.1, Nursery Standards; The ideal landscape tree size should be a minimum of 1-inch caliper (diameter), measured at 6" above the ground and 8 feet tall when planted, and a maximum of 3-inch caliper and 16 feet tall. Smaller trees, seedlings and saplings, are for special purposes, such as mass plantings for a windbreak.**

Trees to be purchased should be healthy and well cared for by a reputable nursery, garden center, landscape contractor or mail-order company. Trees should be self-supporting with central, straight trunks and intact leaders. Branches should be evenly spaced along the central stem to provide strong structure. Trunks should be free of abrasions, cuts, insects and disease. The root system should be healthy and not extremely root-bound (excessive roots within the container). Avoid trees that have been "headed back" with their tops removed.

TREE TYPE

Landscape trees can be obtained in three basic types: bare-root, container, and balled and burlapped (B&B). Each type has its own advantages and disadvantages with no one type ideal for all situations. An adequate root system should be provided with each type. A good rule of thumb should be 10-12 inches of spread or diameter of container for each inch of stem caliper. Therefore, a 3-inch caliper tree should have a minimum root ball 30-36 inches wide.

- ***Bare root trees*** **should be planted only when they are dormant from late fall to early spring. Large bare-root trees may be difficult to find, but they have the best record for successful landscape plantings.**
- ***Container-grown trees*** **are convenient for handling any time of the year, but may have bound roots due to a lack of root pruning. Remove containers and cut any circling roots to avoid later girdling roots.**
- ***Balled and Burlapped trees*** **will have a ball of soil encasing roots in burlap held in place with twine, nails, and possibly a wire basket. Avoid rough handling that may cause the ball to break, damaging the roots.**

Root coverings; including containers, burlap, wire baskets, twine, bags, and wraps should be removed at the time of planting.

TREE SELECTION

Select tree species for characteristics that will accommodate the site; plant the right tree in the right place. Trees should be adaptable to the climate, soil, and available growing space. Tree placement should not interfere with existing utilities or infrastructures. A desirable landscape tree does not require extensive maintenance.

PLANTING TIMING

Successful plantings should either be between September 15 and November 10 in the fall, or between March 15 and June 10 in the spring. Avoid planting in the heat of the summer.

TREE PLANTING PROCEDURES

Step 1. <u>Digging the Hole</u>.

The planting hole should be much wider than the root ball with sloping sides; a hole at least 3 times the root ball width is best. The hole should be just deep enough so the bottom of the root ball can be placed on undisturbed soil and the root flare where the roots fan out from the trunk will be at or above the level of the surrounding soil.

Step 2. <u>Placing the Tree</u>.

Place the tree in the bottom of the hole onto undisturbed soil with its stem vertical. Handle the tree by the root ball or container to avoid trunk damage. Trees should not be dropped into the hole to avoid loosening the root ball or breaking roots. Orient the tree in the same direction

it was growing at the nursery by placing its natural lean toward the southwest. The root flare should be at or above the soil grade level. Remove all packing materials such as twine, burlap, wire baskets, etc. after the tree has been placed in the hole.

Step 3. <u>Backfilling.</u>

Fill the hole with the original native soil. Start by filling around the root ball about half way up, then lightly compress this soil by stepping on it to eliminate air pockets and to firm up the base support for the tree. Then fill the hole the rest of the way. Additives, such as fertilizers, mulches, and organic matter like peat moss, are not necessary nor desirable. New roots have a hard time processing fertilizers and extending growth at the same time. Upper woody roots should be exposed at the completion of the backfilling. Place a 4-inch layer of organic mulch around the top of the root ball that extends outward to a minimum of 3 feet out from the trunk on all sides. The mulch should be pulled away from contact with the trunk.

Step 4 <u>Watering</u>.

Water the planting sites prior to planting. If using a back hoe, water the holes and the excavated soil the

day before the trees are to be planted. Water immediately after backfilling to settle the soil and remove air pockets. Additional soil can be placed where settling occurs, but avoid packing after the soil is wet. Build up a soil ring at the edge of the root ball to keep water flowing into the root ball. Roots will not grow into dry soil, therefore the soil surrounding the newly planted tree should also be kept wet during the establishment period.

Step 5. Staking.

Trees should generally not be staked. Stake trees only when they are incapable of supporting themselves due to high winds, sandy soils, or planted bare-root. Stakes are placed at right angles to the prevailing wind in the native, undisturbed soil surrounding the tree. The attaching materials, wide canvas, burlap, or similar materials, are placed around the tree to prevent trunk damage. Tie materials should be loose to allow for 4-6 inches of movement. Stakes are to be removed after one year.

Step 6 Tree Wraps.

Tree wraps are not necessary and not recommended. Tree trunks contain chlorophyll and therefore photosynthesize during the winter months. Tree wraps tend to provide habitat for insects and disease, and cause harmful temperature differentials.

Step 7. Pruning.

The only pruning necessary at planting is to remove broken or dead branches, and crossing or rubbing branches. "Heading back' at planting to "balance" the roots and crown only weakens the tree and is not recommended. Branches that are too low or otherwise poorly located should be removed in a year or two when the tree has had a chance to recover from the planting.

Step 8 Weed Control.

A wide mulch bed several inches deep around the tree provides the best weed control. Weed barrier fabrics may be placed underneath the mulch bed, but they must be permeable to allow for the exchange of air and water. Avoid the use of plastic fabrics or the application of herbicides that may be taken up by the tree roots.

POST PLANTING MAINTENANCE

Newly-planted trees need to be watered at least weekly during the summer months. Water needs to be applied both on top of the root ball as well as to the surrounding soil. Roots will not grow into dry soil. Root balls tend to dry out quickly in the summer due to high transpiration rates.

Fertilizers should not be applied until the second year following planting. Apply 6 pounds per 1,000 square feet of actual nitrogen. One 50-pound bag of 21-0-0 ammonium sulfate has 10.5 pounds of nitrogen. Apply one pound per tree per year of actual nitrogen to a distance 6 feet around the tree. Apply mulch to conserve water and lower soil pH .

Replenish mulch every year. Keep the depth near 4 inches. Keep mulch away from the trunks.

Remove any stakes after the first growing season.

Remove all labels, tags, and ties from trees. These will girdle the branches.

Prune for form, do not remove more than 25% of the tree crown at any one time.

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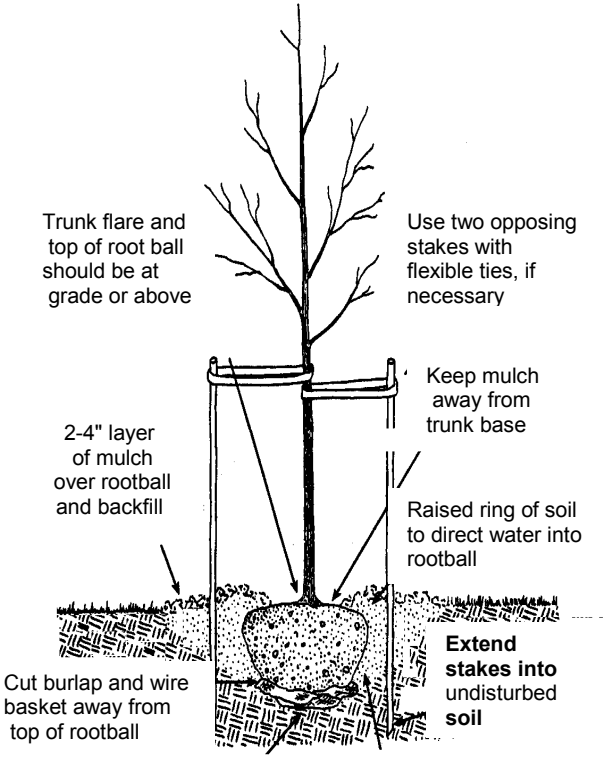
Nevada Division of Forestry



Width of planting hole is 2-3 times root ball diameter